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VOL. 25 NO. 15 April 11, 1975

Reserve

Cooperative Economic Insect Report

Issued by
PLANT PROTECTION AND QUARANTINE PROGRAMS
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
U.S.DEPARTMENT OF AGRICULTURE

ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE PROGRAMS
NEW PEST DETECTION AND SURVEY STAFF

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Service serves as a clearing house and does not assume responsibility for accuracy of the material.

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Hyattsville, Maryland 20782

Volume 25 April 11, 1975 Number 15

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

BEET LEAFHOPPER spring survey in Texas indicates population at alltime low over western half of State. Most significant decrease was in El Paso Valley, where population traditionally heaviest. (p. 289).

ALFALFA WEEVIL infestations increased on alfalfa in some areas, tip feeding evident. Adults active in Ohio, mating and oviposition underway. (pp. 291-292).

Predictions

WHITE PINE WEEVIL populations expected to be above normal in central Maryland this spring. (p. 293).

NORTHERN PINE WEEVIL and PALES WEEVIL expected to show continuous increases in Ohio again in 1975. (p. 293).

Detection

New State records include an ACARID MITE in Oregon (p. 292), a MOSQUITO in Ohio (p. 294), and a TENEBRIONID BEETLE in Idaho (p. 295).

For new county and island records see pages 296, and 305-309.

Some First Appearances of the Season

BROWN WHEAT MITE in wheat and EASTERN TENT CATERPILLAR larvae on fruit trees in Oklahoma. A NOCTUID MOTH in Ohio blacklight trap. APPLE APHID on apple trees in Alabama. COMMON CATTLE GRUB adults in Oklahoma. HORN FLY in Mississippi.

Special Reports

Distribution of Face Fly (map). (p. 298).

Summary of Insect Conditions in the United States - 1974.
  Forest Insect and Disease Highlights. (pp. 299-301).
  Addendum. (p. 302).
  Contributors. (pp. 303-304).

New Distribution Records of Thirty-eight Species of Virginia Tabanids (Diptera: Tabanidae). (pp. 305-309).

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WEATHER OF THE WEEK ENDING APRIL 7

Reprinted from Weekly Weather and Crop Bulletin supplied by National Weather Service, NOAA.

HIGHLIGHTS: The average temperature over the entire Nation, except for southern Florida, was below normal last week. Heavy snow with thunderstorms immobilized Chicago and southern Michigan on Wednesday and Thursday. Gale-force winds wracked the North Central and Northeastern States during the latter half of the week.

PRECIPITATION: A new storm system moved from southwest Canada to the South Dakota-Minnesota border on Monday. Snow fell from Wisconsin to the Dakotas. Another Low in Nevada brought snow-showers to the area. Tuesday, the northern Low had moved to the vicinity of Lake Erie. Cold air behind the Low moved with the cold front from the Low center to northern Oklahoma and the Texas Panhandle and to another Low in Colorado. Snow fell in the eastern Great Lakes area and in Utah, Colorado, Wyoming, and Kansas. Elsewhere an onshore flow caused rain along the coast from Virginia to Georgia. The Colorado Low deepened on Tuesday and moved to southwest Missouri. A ridge of High pressure through the Midwest caused high winds to the east and north of the Low. Snow fell over western Kansas, Nebraska, and South Dakota. A warm front extended east from the Low through Virginia. Rain and freezing rain fell in cold air north of a front from Ohio to northern Missouri, while snow fell in the Great Lakes area and in Iowa. Late in the day, thunderstorms occurred with heavy snow in southern Michigan. Residents claim they saw green lightning. Thunderstorms also occurred in the Southeast. A Pacific front moved onshore in Washington and Oregon on Wednesday causing

Weather of the week continued on page 310.

Beet Leafhopper Survey in Texas - Spring 1975

The BEET LEAFHOPPER (Circulifer tenellus) survey in Texas was conducted during period February 25 through March 18. Thirty counties were included with a total of 66 stops. Host plants were present at 100 percent of these stops. Beet leafhoppers averaged 7 per 100 square feet, and were found at 23 percent of the stops.

Significant Observations: Beet leafhopper counts dropped to an alltime low this year, being only a fraction of the 1974 population. Coverage of host plants over entire western half of State is phenomenal. Plants are denser, growth accelerated, and there are more varieties than ever observed. As beet leafhoppers thrive under hot, dry, desert conditions, it is believed the abnormally heavy fall and winter rainfall that occurred over the area tended to have adverse effects on the overwintering population. Also, the wide coverage of host plants has survivors diluted. It is not likely that there will be a high incidence of curly-top virus in surviving beet leafhopper population in 1975.

Current Conditions: Overwintering beet leafhopper population is very small and diluted this year. The current count is 7 per 100 square feet compared to 97 per 100 square feet in 1974. The most significant decrease was in the El Paso Valley, where the traditionally heaviest beet leafhopper population is extremely low this year. Only one beet leafhopper was found in the High Plains portion of the survey area, where the State's sugar beet crop is grown. Beet leafhopper populations in the Winter Garden area (Crystal City, Uvalde, and Del Rio) were slightly lower in 1975 than in 1974. (Boyd, Duncan).

CALIFORNIA - Continued rains and mild temperatures in San Joaquin Valley kept host annuals from stressing and beet leafhoppers from developing. Some overwintering females with eggs still found in most areas. Some isolated small areas or slopes ahead of others, green areas surrounding these will hold any adults forced to move. Treatments in these districts not expected to begin for 10-14 days. Treatments ended in Imperial Valley, Imperial County. Weather conditions delayed continous treatment; treatment conducted only on 5 of 10 days; 7,638 acres treated. Many leafhoppers lost due to weather and delay of treatment. Two sections north of Glamis not treated. These contain significant beet leafhopper populations. (Cal. Coop. Rpt.).

ARMY CUTWORM (Euxoa auxiliaris) - NEW MEXICO - Small outbreaks of activity continued to be reported. One report from Luna County indicated heavy feeding on tansey mustard (Descurainia spp.) in desert areas south of Deming. One report from Valencia County, west of Belen, revealed pest migrating into buildings. To date, no major damage to cultivated crops observed or reported. (N.M. Coop. Rpt.). OKLAHOMA - Moderate to heavy in wheat in Harper County; moderate in 3 fields in Beaver County. (Okla. Coop. Sur.). COLORADO - Light to moderate in Cheyenne County winter wheat. (Hantsbarger).

CORN LEAF APHID (Rhopalosiphum maidis) - NEW MEXICO - Light on small grains throughout eastern area. Counts ranged up to 40 per linear foot in one field in Curry County where field manured and not plowed down. None found in adjoining field. Wheat and barley in excellent condition at this time with few insect problems. (N.M. Coop. Rpt.). TEXAS - Infestations on grain sorghum appear to be rapidly declining in south-central area as parasitic wasp populations increasing. (Cole). NORTH CAROLINA - Observation of about 50 small grain fields in Coastal Plain revealed very light populations in all fields examined. Colonies difficult to find in all fields visited. (Hunt).

GREENBUG (Schizaphis graminum) - MISSOURI - Light in 3 of 5 wheatfields checked in southwest area; ranged 0-30 per drill row foot. Light in orchard grass in Christian County; found only in 2 spots in 80-acre field. (Munson). KANSAS - Trace in two 3 to 4-inch wheatfields in Montgomery County; none found in 4 to 7-inch wheat in Cherokee, Chautauqua, or Elk Counties. (Bell). ARKANSAS - Only an occasional aphid found in wheat and oats on farm in Washington County. (Boyer).

OKLAHOMA - Greenbug ranged 15-260 per linear foot in wheat checked in Tillman, Jackson, Harmon, Greer, and Cotton Counties, and 5-200 per linear foot in Caddo, Washita, and Beckham Counties. Light in Roger Mills County, moderate to heavy in Beaver County. Averaged less than 1 per linear foot in Major County. (Okla. Coop. Sur.). TEXAS - Light on grain sorghum throughout south-central area, noneconomic to date. (Cole). NEVADA - This species and Rhopalosiphum padi averaged 25 per sweep on grains in Virgin Valley, Clark County. (Hoff).

POTATO PSYLLID (Paratrioza cockerelli) - ARIZONA - None observed in four Maricopa County potato fields checked in area on western side of Salt River Valley. (Ariz. Coop. Sur.).

SMALL GRAINS

YELLOW SUGARCANE APHID (Sipha flava) - TEXAS - Increased on sorghum in northern and western areas of south-central section. Economic in some Milam County fields. (Cole).

AN APHID (Rhopalosiphum padi) - OKLAHOMA - Light in most wheatfields in west-central counties. Ranged 20-80 per linear foot in southwest counties. (Okla. Coop. Sur.).

WINTER GRAIN MITE (Penthaleus major) - OKLAHOMA - Light, 10-12 per linear foot, in most wheatfields in southwest counties. (Okla. Coop. Sur.).

BROWN WHEAT MITE (Petrobia latens) - OKLAHOMA - Light in wheat in Cimarron County. First of season. (Okla. Coop. Sur.).

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) - OKLAHOMA - Terminal infestations ranged 25-95 percent (1-7 larvae per terminal) in alfalfa in Tillman, Harmon, Jackson, Greer, Cotton, and Comanche Counties. Counts ranged 30-50 percent (up to 5 larvae per terminal) in Caddo, Washita, Beckham, and Roger Mills Counties. Moderate to heavy in Grady, Garvin, and Muskogee Counties. Terminal infestations averaged 72 percent (1-5 larvae per terminal) in Kay and Noble Counties, 44 percent (1-3 larvae per terminal) in Major County. (Okla. Coop. Sur.). ARKANSAS - Increased on alfalfa in northwest area week ending March 28. Larvae averaged 0.85 per stem on farm in Washington County. Averaged 0.31 per stem previous week. (Dumas). MISSOURI - Counts in Douglas County averaged 3 larvae per alfalfa stem. Feeding damage visible. (Huggans).

KANSAS - Subfreezing temperatures April 2 killed some alfalfa weevil larvae as far south as counties bordering Oklahoma in southeast district. An estimated 20 percent larval mortality noted in one Chautauqua County field. Nevertheless, economic counts of live larvae (2 or more per stem) noted following freezing weather in field in Chautauqua County and in field in Wilson County; counts near economic level found in fields surveyed in Montgomery and Elk Counties. Many fields in southeast district and southern counties of south-central district expected to require treatment soon, providing warmer weather prevails. During period April 2-3, larval counts per stem in 2.5 to 4.5-inch alfalfa in 7 southeast district counties ranged from 0.6 in Woodson County to 3.7 in Wilson County. Percent tips showing feeding damage ranged from 5 in Woodson, Elk, and Montgomery Counties to 10 in Labette, Cherokee, Wilson, and Chautauqua Counties. Most larvae first and second instars; 50 whole stems per field sampled. (Bell).

ILLINOIS - Unexpected high percentage of tip feeding by first and second-instar alfalfa weevil larvae noted in Washington County due to several days of warm and sunny weather. Alfalfa growth 1-2 inches below normal due to cold spring. Tip feeding averaged 50 percent with 120 larvae per 100 stems in one field. Eggs averaged 500+ per square foot in same field. Countywide, tip feeding averaged 20 percent (range 0-50) with average of 40 larvae (range 0-120) per 100 tips. Alfalfa ranged 3-4 inches tall. (Ill. Ins. Rpt.). INDIANA - Results of egg counts made during March showed mean number of eggs per square foot by district as follows: Northwest (1 county) 42; north-central (3 counties) 52; northeast (2 counties) 26; west-central (3 counties) 49; central (3 counties) 34; east-central (2 counties) 51; southwest (3 counties) 229; south-central (4 counties) 214. One field checked in each county. (Meyer).

OHIO - Active alfalfa weevil adults collected in alfalfa on warm evenings. Mating and oviposition underway but peak will not occur until alfalfa about 6 inches tall. New growth of alfalfa just beginning in Franklin and Delaware Counties in central area. In Delaware County, old alfalfa stems 12-18 inches tall were split; fresh and overwintering eggs found April 2. All adults to date examined for parasitoids in laboratory; single Microctonus colesi (a braconid wasp) recovered from specimens collected March 22 in

Hancock County. (Lewis). KENTUCKY - At 5 Warren County locations, infestations in alfalfa ranged 20-80 percent, larvae 0.7-2.1 per tip. (Barnett). TENNESSEE - Larvae ranged 5-34 per 50 tips in central area, well below economic threshold. (Cagle, Gordon).

VIRGINIA - Based on 14 fields sampled (145 acres), 26.9 percent of tips infested with alfalfa weevil larvae. Average estimated defoliation 1.04 percent. Larvae still too small to cause serious damage and growers advised not to treat until damage increases. Economic threshold exceeded in 4 fields (29 percent of sample and 31 percent of acreage). (Allen). MARYLAND - No larval activity detected in central area alfalfa. (U. Md., Ent. Dept.).

PEA APHID (*Acyrthosiphon pisum*) - NEVADA - Ranged 50-150 per sweep on alfalfa hay in Moapa and Virgin Valleys, Clark County. Numerous lady beetle and syrphid fly larvae present. *A. pisum* averaged 150 per sweep on alfalfa hay in Pahrump Valley, Nye County, with very few predators or parasites present. Treatment of 600 acres planned. (Hoff). NEW MEXICO - Populations fluctuating in Pecos Valley alfalfa, with counts in some fields as high as 50-100 per 25 sweeps near Carlsbad, Eddy County. (N.M. Coop. Rpt.). OKLAHOMA - Ranged light to heavy in alfalfa in Caddo, Washita, and Beckham Counties, moderate to heavy in Comanche County, light in Garvin County. Counts per square foot averaged 40 in Major County, 15 in Noble County, and 5 in Kay County. (Okla. Coop. Sur.).

GENERAL VEGETABLES

AN ACARID MITE (*Tyrophagus neiswanderi*) - OREGON - Generally infested commercially grown cucumbers in greenhouse operation at Milton-Freewater, Umatilla County. Collected by M. Dunning, March 26, 1975. Determined by J. Krantz. This is a new State record. This mite first described in 1965 from northern Ohio where it was found infesting *Cucumis*. This is apparently the first authenticated occurrence of this mite from the Western United States. (Capizzi).

DECIDUOUS FRUITS AND NUTS

EASTERN TENT CATERPILLAR (*Malacosoma americanum*) - OKLAHOMA - Light on fruit trees in Pittsburg County March 28. This is first report of season. (Okla. Coop. Sur.).

A NOCTUID MOTH (*Orthosia hibisci*) - OHIO - First 5 adults of season taken in blacklight trap operated during period March 31 to April 4 at Wooster, Wayne County. (Lewis).

APPLE APHID (*Aphis pomi*) - ALABAMA - Infested several apple trees in Lee County. First report of season. (McQueen).

EUROPEAN RED MITE (*Panonychus ulmi*) - OHIO - Overwintering eggs light on apple trees in Fairfield County orchard; averaged 380 per foot of rough stem. (Holdsworth).

APPLE RUST MITE (*Aculus schlechtendali*) - OHIO - Adults which overwinter under bud scales have broken dormancy; found feeding in young buds on apple trees in Jackson County. (Holdsworth).

CITRUS

SPIREA APHID (*Aphis spiraecola*) - CALIFORNIA - This species and *Toxoptera aurantii* (black citrus aphid) very heavy on citrus trees at Imperial Beach, San Diego County. (Cal. Coop. Rpt.).

ORNAMENTALS

EASTERN TENT CATERPILLAR (*Malacosoma americanum*) - TEXAS - Noted on ornamentals in Caldwell, Fayette, and Bastrop Counties. (Cole).

WHITE PINE APHID (*Cinara strobi*) - MARYLAND - Numerous reports of egg finds in the central area week ending March 28 indicate above normal populations can be expected in the spring. (U. Md., Ent. Dept.).

LONGTAILED MEALYBUG (*Pseudococcus longispinus*) - IDAHO - Seriously damaged ornamental laurel, ferns, and other plants in shopping mall at Boise, Ada County. (Peterson).

FOREST AND SHADE TREES

SOUTHERN PINE BEETLE (*Dendroctonus frontalis*) - VIRGINIA - Infestation extremely severe in Lunenburg County. A 10-percent sample indicated average spot size 10.5 acres (ranged up to 100 acres) and 14 percent of pine pulpwood volume (using 1966 forest survey figures) in entire county already damaged and 28 percent of the pine sawtimber volume. Damage considerably heavier in northwest corner of area, this is worst area of infestation. Current volume damaged by *D. frontalis* to date constituted 5 times annual pulpwood cut and 3 times annual sawtimber cut in Lunenburg County. Beetle activity in Albemarle County began significant increase late in 1974. Air survey showed 103 new spot infestations (average size 2 acres including buffer strip). Sample survey, 15 spots, estimated total damage at 6,200 cords and 27,500 board feet for 1974. Sample of 50 spots in Fluvanna County (126 active spot infestations) resulted in estimate of spot size as 1.2 acres. Total damage 2,963 cords and 375,400 board feet for 1974. Damage in State in 1973 estimated at 1.3 million dollars, this increased to 1.7 million dollars in 1974. (Vir. Div. For., March 1975).

NORTHERN PINE WEEVIL (*Pissodes approximatus*) - OHIO - Populations of this weevil and *Hylobius pales* (pales weevil) expected to show continuous increases in 1975 as for past 3 years. Adults active on conifers past 7 days; mating and oviposition will continue through end of April. (Balderston, Nielsen).

PITCH TWIG MOTH (*Petrova comstockiana*) - WEST VIRGINIA - Pupae found on Scotch and white pine saplings on one-acre plantation in Jackson County by L.L. Smith. Determined by A.R. Miller. (Miller).

EASTERN TENT CATERPILLAR (*Malacosoma americanum*) - MISSISSIPPI - Tents apparent in black cherry and wild plum in Oktibbeha County. This is first indication of activity in the county. (Pfrimmer). ALABAMA - Full-grown larvae nuisance to homeowner in Escambia County. Larvae in search of pupation site. Pupation earlier this season than usual in southern area. (Knowles, Lawson).

SCREWWORM (Cochliomyia hominivorax) - Total of 10 cases reported from continental U.S. during period March 23-29, all in Texas. Cumulative total for 1975 is 29 cases compared to 115 in 1974. This represents 75 percent reduction. Total of 106 cases confirmed from Mexico. Number of sterile flies released in U.S. this period totaled 28,455,000, all released in Texas. Total of 106,507,800 sterile flies released in Mexico. (Vet. Serv.).

FACE FLY (Musca autumnalis) - MISSISSIPPI - Adults continued to leave overwintering sites in Chickasaw, Monroe, Pontotoc, and Union Counties. Thousands of flies found in attic and outside of residence at Ecru, Pontotoc County. Treatments not completely effective, several thousand killed but many remained alive. Check of outside of building indicated 95 percent males, while those collected inside attic 90 percent females. (Robinson). ALABAMA - Collected from beef cattle at Gold Hill, Lee County, in September 1974 by K. Hays. Determined by H. Cunningham. This is a new county record. (McQueen).

HOUSE FLY (Musca domestica) - TEXAS - Beginning to increase rapidly in poultry houses in south-central area. (Cole).

CATTLE GRUBS (Hypoderma spp.) - NORTH DAKOTA - Examination of 2,599 head of cattle at five livestock auction markets March 10-April 3 showed 12 percent of animals infested with 1-45 (average 5.4) grubs per animal. This is decrease from 13 percent found infested with 7.1 grubs during 1974. (Brandvik, Scholl). KENTUCKY - Larvae averaged 1.8 per animal on backs of 25 Holstein dairy cows of various ages in Fayette County. (Barnett). OKLAHOMA - First adult of H. lineatum (common cattle grub) activity of season reported in Garvin County March 27. (Okla. Coop. Sur.).

HORN FLY (Haematobia irritans) - MISSISSIPPI - Averaged 25 per head in Oktibbeha County and averaged 10 per head in Monroe, Chickasaw, and Pontotoc Counties for first time this season. (Robinson).

MOSQUITOES - OHIO - Aedes triseriatus first-instar larvae collected in 8 tree holes in Gambier, Knox County, March 18; second instars of Aedes canadensis observed in Remindersville, Summit County, April 1. Adult male of Psorophora howardi collected September 10, 1974, in Cincinnati, Hamilton County, in light trap operated by Cincinnati Health Department. Recently determined by R.L. Berry. This is a new State record. (Lewis).

CATTLE LICE - OKLAHOMA - Lice, mainly Haematopinus eurysternus (shortnosed cattle louse), continued moderate to heavy on cattle checked in Garvin County. (Okla. Coop. Sur.).

LONE STAR TICK (Amblyomma americanum) - OKLAHOMA - Moderate on beef cattle in Pittsburg County. (Okla. Coop. Sur.).

HOUSEHOLDS AND STRUCTURES

EASTERN SUBTERRANEAN TERMITE (*Reticulitermes flavipes*) - MARYLAND - Swarming activity steadily increased throughout central area. Peak activity expected later this month. (U. Md., Ent. Dept.). WEST VIRGINIA - Winged forms numerous in Kanawha County home April 3. (Cole). MISSISSIPPI - Adults swarming in Oktibbeha County for past 14 days. (Brook).

MISCELLANEOUS WILD PLANTS

A TENEBRIONID BEETLE (*Eleates explanatus*) - IDAHO - Adults collected on *Fomes pinicola* growing on *Pseudotsuga menziesii* (Douglas-fir) in fir forest 6 miles northwest of Pierce, Clearwater County, June 4, 1974, by D.L. Kulhavy. Determined by T.J. Spilman. This is a new State record. (PPQ).

BENEFICIAL INSECTS

LADY BEETLES - KANSAS - Overwintering *Hippodamia convergens* (convergent lady beetle) adults often numerous in samples of bunch grass (mostly little bluestem) taken from late February through mid-March 1975 for winter chinch bug survey; these hibernating beetles more numerous than since 1972. Up to 1,170 adults per square foot of bunch grass found in one sample taken in Washington County with average of 340 per square foot for 4 samples taken in county. Survey (4 samples per county) involved most of eastern half of State. Results from 1972 and 1975 surveys showed fewer lady beetles hibernating in southeastern area than in remaining portion of surveyed area. (Bell). OKLAHOMA - *H. convergens* larvae ranged 0-3 per linear foot in *Schizaphis graminum* (greenbug) infested wheat in southwest counties. Adults also present. Adults moderate in wheat and alfalfa in west-central and light in alfalfa in Kay and Major Counties. (Okla. Coop. Sur.). ARKANSAS - *Coleomegilla maculata* still found in winter quarters under pine straw at bases of pine trees on farm in Washington County. (Boyer).

A CLERID BEETLE (*Thanasimus dubius*) - WEST VIRGINIA - Found on windowsill of home in South Carleston, Kanawha County, April 3, 1975, by E. Litteral. Determined by J.D. Hacker. This is a new county record. (Hacker). Most species of family predaceous, as adults and larvae, on other insects. Clerids are generally associated with woody plants; can be found on or under bark, in tunnels of wood and cone borers, in galls or on plant foliage and dead twigs. (PPQ).

GREEN LACEWINGS (*Chrysopa* spp.) - OKLAHOMA - Adults light in wheat in several southwest counties. (Okla. Coop. Sur.).

A THRIPS (*Scolothrips pallidus*) - KANSAS - Collected from spider-mite infested corn leaves in Stevens County August 2, 1974, by D. Mock. Determined by L.J. Stannard. Adults and last 2 larval instars of this thrips are predaceous. (Bell).

A BRACONID WASP (*Lysiphlebus testaceipes*) - OKLAHOMA - Parasitism of *Schizaphis graminum* (greenbug) increased in wheat in southwest area. Mummies ranged 0-4 per linear foot and adults 0-2 per linear foot. Light populations reported in Caddo, Washita, and Beckham Counties. (Okla. Coop. Sur.).

A CHALCID WASP (*Brachymeria intermedia*) - WEST VIRGINIA - Total of 329 adults released during period March 18-27 in St. Albans area of Kanawha County. Specimens released rather than allowed to die in laboratory. (Coffman).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

CEREAL LEAF BEETLE (*Oulema melanopus*) - KENTUCKY - No damage noted in winter wheatfields checked in Madison, Mason, and Nicholas Counties. (Barnett).

RED IMPORTED FIRE ANT (*Solenopsis invicta*) - FLORIDA - Adults found in sod at four locations in Miami, Dade County, April 1, 1975, by H.L. Gillis, F.D. Urso, J.T. Felty, and V.G. Brown. This is first record of *S. invicta* in county. Last infestation of *Solenopsis* sp. in Dade County was in October 1958 and was declared eradicated. Adults found at location in West Palm Beach, Palm Beach County, March 20, 1975, by L.L. Carpenter. Determined by D.R. Smith. This is a new county record. (Fla. Coop. Sur.).

WHITEFRINGED BEETLES (*Graphognathus* spp.) - ALABAMA - Numerous larvae of various ages damaged root systems of home garden vegetables at Newton, Houston County. (Roney).

WEST INDIAN SUGARCANE ROOT BORER (*Diaprepes abbreviatus*) - FLORIDA - Adults heavy on stems and leaves of 50 percent of 25 *Cupressus sempervirens* (Italian cyress) examined March 31 at nursery in Davie, Broward County, by R.L. Chavez. Adults moderate on leaves of 20 percent of 12 *Citrus* sp. (marsh grapefruit) trees examined April 1 at nursery in Plymouth, Orange County, by S. Beidler. (Fla. Coop. Sur.).

DETECTION

New State Records - AN ACARID MITE (*Tyrophagus neiswanderi*) - OREGON - Umatilla County. (p. 292). A MOSQUITO (*Psorophora howardi*) - OHIO - Hamilton County. (p. 294). A TENEBRIONID BEETLE (*Eleates explanatus*) - IDAHO - Clearwater County. (p. 295).

New County and Island Records - AN ARMORED SCALE (*Pinnaspis strachani*) HAWAII - Lanai Island (p. 297). BANANA SKIPPER (*Erionota thrax*) HAWAII - Molokai Island (p. 297). BLACK THREAD SCALE (*Ischnaspis longirostris*) HAWAII - Lanai Island (p. 297). A CLERID BEETLE (*Thanasimus dubius*) WEST VIRGINIA - Kanawha (p. 295). FACE FLY (*Musca autumnalis*) ALABAMA - Lee (p. 294). FLORIDA RED SCALE (*Chrysomphalus aonidum*) HAWAII - Lanai Island (p. 297). LARGE MANGO TIP BORER (*Bombotelia jocosatrix*) HAWAII - Lanai Island (p. 297). RED IMPORTED FIRE ANT (*Solenopsis invicta*) FLORIDA - Palm Beach (p. 296).

HAWAII INSECT REPORT

General Vegetables - ONION THRIPS (Thrips tabaci) heavy in 5+ acres of onions on Molokai; 10+ immatures and adults on infested plants. Damage heavy, most plants with damaged leaves. DIAMONDBACK MOTH (Plutella xylostella) larvae moderate to heavy on head cabbage plantings at Kaunakakai, Molokai. All immature stages present. Damage severe on 20-30 percent of heads. (Mau).

Fruits and Ornamentals - LARGE MANGO TIP BORER (Bombotelia jocosatrix) larvae and damage moderate on single mango tree at Kaumalapau and several mango trees at Maunalei, Lanai. This is a new island record. (Nakao et al.). FLORIDA RED SCALE (Chrysomphalus aonidum) light on 50 coconut trees surveyed at Maunalei, Lanai; heavy, 10-15 per square inch, on 5 trees. This is a new island record. (Kahoohalahala et al.). AN ARMORED SCALE (Pinnaspis strachani) light in roadside patches of ilima plants at Maunalei, Lanai. This is a new island record. (Miyahira). CHINESE ROSE BEETLE (Adoretus sinicus) caused moderate damage to 1,000+ potted false kamani saplings at Maunalei, Lanai. Heavy damage, 50-75 percent defoliation, noted on 10 percent of saplings. (Nakao et al.). BLACK THREAD SCALE (Ischnaspis longirostris) moderate on 50 coconut trees at Maunalai, Lanai. Heavy, up to 150 per square inch, noted on 5 trees. Also light to moderate on about 50 mango trees in area. This is a new island record. (Kahoohalahala et al.). Light infestation of BANANA SKIPPER (Erionota thrax) discovered at Kalamaula and Kaunakakai, Molokai. Early and late-stage larvae present. Empty pupal skins also found. This is a new island record. Lanai is only island where E. thrax has not been found in State. (Mau).

CORRECTIONS

CEIR 25(14):266-267 - FORAGE LEGUMES - ALFALFA WEEVIL - Note from MISSISSIPPI should be CLOVER HEAD WEEVIL (Hypera meles) instead of ALFALFA WEEVIL (Hypera postica). (Robinson).

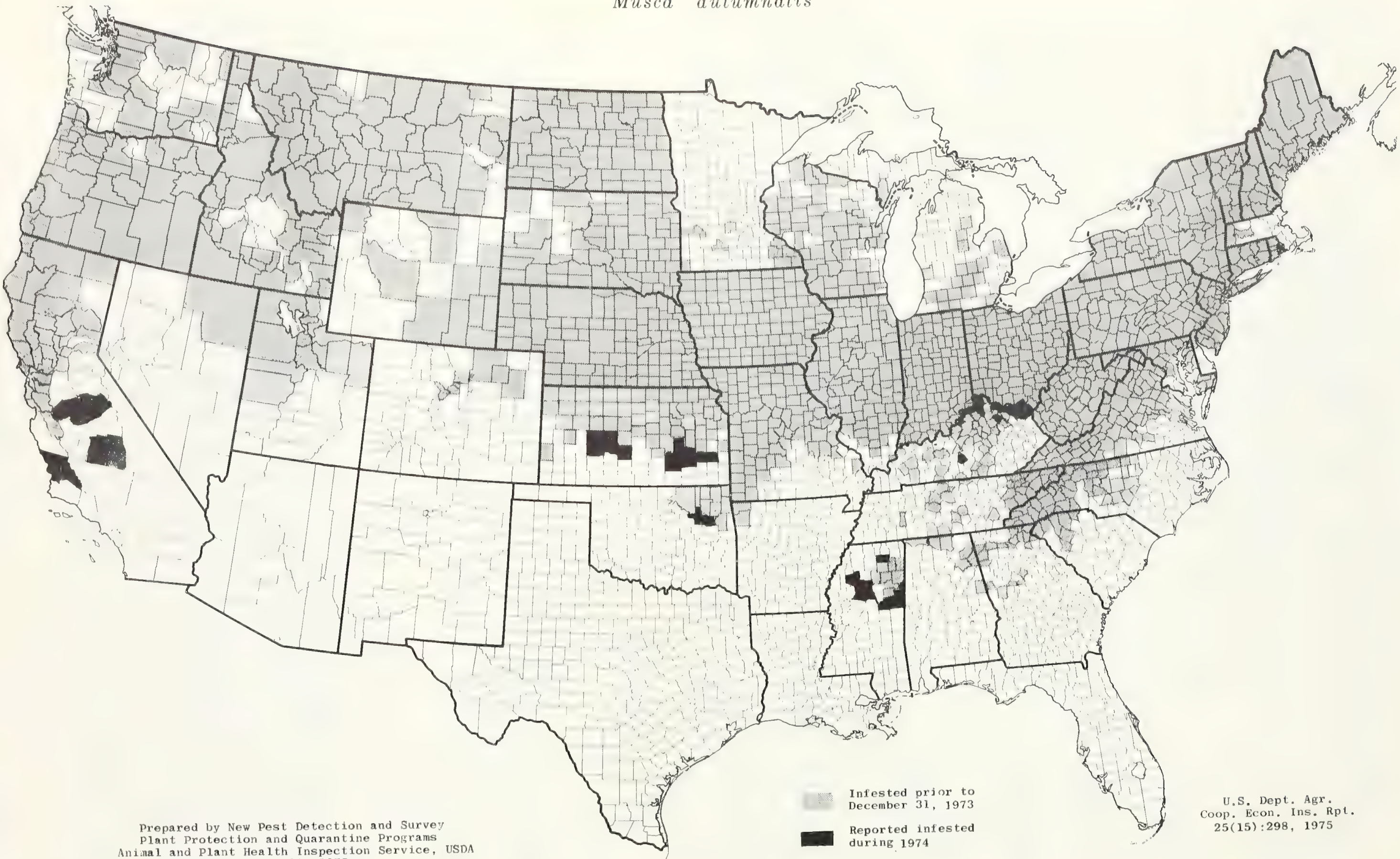
CEIR 25(13):252 - CITRUS - "CALIFORNIA RED SCALE (Aonidella aurantii) ... " should read "CALIFORNIA RED SCALE (Aonidiella aurantii) ..."

LIGHT TRAP COLLECTIONS

ARIZONA - Mesa, 3/24-30, BL, ARMY CUTWORM (Euxoa auxiliaris) 3, BEET ARMYWORM (Spodoptera exigua) 5, BLACK CUTWORM (Agrotis ipsilon) 2, VARIEGATED CUTWORM (Peridroma saucia) 18, YELLOW-STRIPED ARMYWORM (S. ornithogalli) 1. CALIFORNIA - San Joaquin County, 3/2, 3/12, BL, variegated cutworm 2. FLORIDA - Gainesville, 3/27-4/3, BL, ARMYWORM (Pseudaletia unipuncta) 1, beet armyworm 3, GRANULATE CUTWORM (Feltia subterranean) 11, SALTMARSH CATERPILLAR (Estigmene acrea) 4, yellowstriped armyworm 4. MISSISSIPPI - Stoneville, 3/28-4/3, temp. 33-79, precip. 3.11 inches, 2BL, armyworm 986, black cutworm 115, BOLLWORM (Heliothis zea) 3, variegated cutworm 258. NEW MEXICO - Las Cruces, 3/25-4/2, BL, army cutworm 2, beet armyworm 10, variegated cutworm 16.

Distribution of Face Fly

Musca autumnalis


▨ Infested prior to December 31, 1973
■ Reported infested during 1974

Prepared by New Pest Detection and Survey
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service, USDA
December 31, 1975

U.S. Dept. Agr.
Coop. Econ. Ins. Rpt.
25(15):298, 1975

SUMMARY OF INSECT CONDITIONS IN THE UNITED STATES - 1974

(Continued from page)

FOREST INSECT AND DISEASE HIGHLIGHTS [1]

Eastern Conditions

The eastern SPRUCE BUDWORM (*Choristoneura fumiferana*), GYPSY MOTH (*Porthetria dispar*), and SOUTHERN PINE BEETLE (*Dendroctonus frontalis*) again topped the list of insect pests in the Eastern United States. The spruce budworm outbreak in MAINE expanded greatly in 1974 with defoliation evident on over 5 million acres. Egg mass population surveys indicate a significant increase in population levels for 1975. A total of 430,000 acres were treated in 1974 with a methylcarbamate at 0.15 pound a.i. per acre. An estimated 3.5 million acres may need treatment in 1975. The spruce budworm populations in MINNESOTA are declining, but those in MICHIGAN and WISCONSIN are slowly increasing. JACK PINE BUDWORM (*Choristoneura pinus*) in the Lake States is on the increase with damaging populations occurring on about 20,000 acres.

Gypsy moth continued to expand its range of activity, although total defoliation was down to 750,905 acres in 1974. Major decreases in acres defoliated occurred in CONNECTICUT, RHODE ISLAND, NEW YORK, and NEW JERSEY. MASSACHUSETTS and MAINE reported an increase in defoliation nearly double the acreage affected in 1973.

Major suppression projects by State and Federal cooperative programs were conducted on 190,000 acres using a methylcarbamate, an organic phosphate, or *Bacillus thuringiensis*. Gypsy moth parasite rearing and release activities were made in several States within the general area of gypsy moth infestation. WISCONSIN, although out of the general infested area, released parasite species for establishment of native defoliator species. A combined suppression activity of the Animal and Plant Health Inspection Service and Michigan Department of Agriculture was conducted on the gypsy moth infestation in central Michigan using a methylcarbamate and combinations of this chemical and Disparlure. Intensive trapping surveys conducted by Agricultural Research Service and Animal and Plant Health Inspection Service using Disparlure showed a general decline in numbers of male moths trapped, but some were trapped in previously unrecorded counties in MISSOURI, WEST VIRGINIA, and OHIO. Infestations found in 1973 at Chapel Hill, NORTH CAROLINA, and Hungry Mother State Park in VIRGINIA were treated with a methylcarbamate by ARS and APHIS.

The SOUTHERN PINE BEETLE outbreak continued to plague southeastern forest land managers from VIRGINIA to TEXAS. About 53 million acres of commercial forests were infested. A conserted effort has been made by land managers to mitigate losses and suppress beetle populations. Salvage operations have produced more than 147.7

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[1] The following summary is the highlights section from the "Forest Insect and Disease Conditions in the United States - 1974" which was compiled and published by the Forest Service, U.S. Department of Agriculture. Copies of the complete annual summary are available upon request from the Regional Forester or Area Director in your area. Addresses of the regional offices may be found on page 301 in this issue of the CEIR.

million board feet of sawtimber and 44 million cubic feet of pulpwood. In general, the outbreak has increased in intensity and acreage in GEORGIA, NORTH CAROLINA, SOUTH CAROLINA, Tennessee, and Virginia. However, in the other States affected by this insect, localized increases have occurred. The struggle to overcome these depredations will continue through 1975.

Other insects of note in the East were OAK LEAFTIER (*Croesia albicomana*), A GEOMETRID MOTH (*Hydria prunivorata*), and HEMLOCK LOOPER (*Lambdina fiscellaria*) in PENNSYLVANIA and FALL CANKERWORM (*Alsophila pometaria*) in VIRGINIA. FOREST TENT CATERPILLAR (*Malacosoma disstria*) continued its activity in LOUISIANA and ALABAMA.

Tree diseases for the most part were static throughout the East. However, there were scattered incidences of increased activity. DUTCH ELM DISEASE continued to spread in WISCONSIN and MINNESOTA and increased in intensity in NEW YORK. BEECH BARK DISEASE caused mortality in beech stands in PENNSYLVANIA, NEW YORK, NEW HAMPSHIRE, and MAINE and moved westward in both New York and Pennsylvania. ASH DIEBACK increased in parts of NEW YORK.

AIR POLLUTION affected trees in many eastern areas. Sulfur dioxide and fluorides caused plant injury in TENNESSEE, ARKANSAS, and ALABAMA. Oxidant pollution caused plant injury in TENNESSEE, NORTH CAROLINA, VIRGINIA, WEST VIRGINIA, and PENNSYLVANIA.

Western Conditions

DOUGLAS FIR TUSSOCK MOTH (*Orgyia pseudotsugata*), WESTERN SPRUCE BUDWORM (*Choristoneura occidentalis*), and several species of BARK BEETLES are the major insect pests in western forests of the contiguous United States. SPEARMARKED BLACK MOTH (*Rheumaptera hastata*) was the major insect pest in ALASKA.

The Douglas fir tussock moth was the target of suppression application using a chlorinated hydrocarbon. A total of 421,800 acres was treated in OREGON, WASHINGTON, and IDAHO, with excellent population reductions. Twenty-seven thousand acres scheduled for pilot tests with *Bacillus thuringiensis* and a nuclear polyhedrosis virus were canceled due to natural population collapses.

Western spruce budworm defoliated nearly 4.2 million acres in MONTANA and IDAHO, with the greatest increase in visible defoliation occurring in Montana east of the Continental Divide. Infestations in WASHINGTON increased and now involve nearly 500,000 acres of Douglas-fir and true fir forests.

Several species of BARK BEETLES (*Dendroctonus* spp.) and ENGRAVER BEETLES (*Ips* spp.) combined with adverse weather in many western forested areas to devastate stands of lodgepole and ponderosa pine. Salvage of dead and dying trees has been hampered by the sagging economic situation. No artificial control activities are underway.

MODOC BUDWORM (*C. viridus*) greatly increased its acreage of defoliation in CALIFORNIA, affecting 354,000 acres. Egg mass populations in the California infestation indicated a collapse of the population in 1975. An additional 90,000 acres of white fir were defoliated on the Fremont National Forest. The outbreak in OREGON is expected to continue.

In ALASKA, SPEARMARKED BLACK MOTH (*Rheumaptera hastata*) caused late summer defoliation of birch over slightly more than 1.25 million acres. Pupal populations indicated widespread defoliation will occur in 1975, but if past outbreak trends are followed, a marked decline will occur in late summer of 1975.

WESTERN BLACKHEADED BUDWORM (*Acleris cloverana*) continued to increase. Although outbreaks were localized, approximately 18,000 acres were infested.

Air pollution continued to be a problem in the Western United States and Alaska. Sulfur oxides, dioxides, and fluorides, emitted from point sources, caused damage to trees in MONTANA and ALASKA. In CALIFORNIA, extensive ozone damage was found in the southern Sierra Nevada. Root diseases and dwarf mistletoes continued to cause damage in many western areas. Nursery diseases, particularly those caused by species of *Pythium*, *Fusarium*, and *Botrytis* caused problems in CALIFORNIA, IDAHO, OREGON, and WASHINGTON nurseries. Extreme weather conditions, ranging from winter injury and drought to excessive rains, killed or predisposed trees to other distructive agents.

REGIONAL AND AREA OFFICE ADDRESSES

U.S. FOREST SERVICE

Region

1 U.S. Forest Service
Federal Building
Missoula, Montana 59801

2 U.S. Forest Service
Denver Federal Center, Bldg. 85
Denver, Colorado 80225

3 U.S. Forest Service
Federal Building
517 Gold Avenue, SW.
Albuquerque, New Mexico 87101

4 U.S. Forest Service
Federal Office Building
324 - 25th Street
Ogden, Utah 84401

5 U.S. Forest Service
630 Sansome Street
San Francisco, California 94111

Region

6 U.S. Forest Service
P.O. Box 3623
Portland, Oregon
97208

10 U.S. Forest Service
Federal Office Bldg.
P.O. Box 1628
Juneau, Alaska
99801

Area

NA Northeastern Area
U.S. Forest Service
6816 Market Street
Upper Darby,
Pennsylvania 19082

SA Southeastern Area
U.S. Forest Service
1720 Peachtree Road, NW.
Atlanta, Georgia
30309

Addendum

CORN, SORGHUM,

Detection surveys for SOUTHWESTERN CORN BORER (Diatraea grandiosella) were conducted during October in 34 of the 35 counties in TENNESSEE not known to be infested by this pyralid. D. grandiosella was found for the first time in Meigs, Putnam, Overton, Bledsoe, Loudon, and Blount Counties, and has now been recorded in 66 of the 95 counties in the State. Loss surveys were conducted in a total of 3,634 acres in the 60 counties known to be infested prior to the detection survey in October. The percent loss per county ranged from zero in Sequatchie and Cumberland Counties to 37.2 percent in Fayette County, with an overall mean average of 7 percent for the 60 counties. The mean average for the 21 western counties was 14.1 percent, with a mean average of 3.2 percent for the 39 infested counties in central and eastern Tennessee.

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) surveys were conducted in TENNESSEE during March and April to determine the percentage of alfalfa fields surveyed at or above control levels for each week as follows: March 8 - 5 fields surveyed, none at control level; March 15 - 19 fields surveyed, 21 percent at control level; March 22 - 14 fields surveyed, none at control level; March 29 - 21 fields surveyed, 29 percent at control level; April 5 - 13 fields surveyed, 23 percent at control level; April 11 - 6 fields surveyed, 18 percent at control level; April 19 - 16 fields surveyed, 13 percent at control level; April 26 - 5 fields surveyed, 20 percent at control level; May 3 - 4 fields surveyed, 25 percent at control level. Weather conditions prior to the first cutting of hay were such that controls could not be applied, or if applied, were not effective. Controls were applied to about 10 percent of the alfalfa fields that had alfalfa weevil populations at, or above, control levels.

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New Distribution Records of Thirty-eight Species of Virginia Tabanids (Diptera: Tabanidae)

William A. Allen 1/ and L.L. Pechuman 2/

Thirty-eight species are listed with 99 new county records. All were adult specimens and were determined by L.L. Pechuman. New county records are designated by an asterisk (*).

Chrysops atlanticus Pechuman. One adult was collected in the Independent City of Hampton by D.E. Simonet June 7, 1974.

Chrysops beameri Brennan. Three specimens were collected in Montgomery County by W.A. Allen July 28, 1974. A single adult has been previously reported from this county (Allen, 1974) but the determination was questionable due to the condition of the specimen.

Chrysops callidus Osten Sacken. Specimens have been taken from: Appomattox County* by A.F. Buckman July 9, 1974 3/; Pulaski County by L.H. Townsend July 2, 1974; and from Wise County* by D.E. Simonet and L.H. Townsend July 6, 1974.

Chrysops cincticornis Walker. A single specimen was collected in Montgomery County by W.A. Allen May 26, 1974, and in Wise County* by L.H. Townsend July 6, 1974.

Chrysops dimmocki Hine. One specimen was taken in Isle of Wight County* May 29, 1974, by W.A. Allen.

Chrysops flavidus Wiedemann. A single specimen was collected in Stafford County* by W.W. Surles and K.J. Surles August 10, 1974.

Chrysops geminatus geminatus Wiedemann. A single specimen was collected in Floyd County* by W.W. Surles July 20, 1974.

Chrysops macquarti Philip. Specimens were collected in: Appomattox County* by A.F. Buckman July 9, 1974; Isle of Wight County* by W.A. Allen May 29, 1974; and Montgomery County by W.A. Allen July 14, 28, 1974.

1/ Extension Specialist, Insect Survey, Department of Entomology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.

2/ Professor of Entomology, Department of Entomology, Cornell University, Ithaca, New York 14853.

3/ Collected in A.T. Adkins canopy trap.

Chrysops moechus Osten Sacken. Four specimens were collected in: Floyd County* by M.P. Parrella, J.T. Trumble, and W.W. Surles July 20, 1974; and from Pulaski County* by W.A. Allen July 9, 21, 1974.

Chrysops niger Macquart. Adults were collected in: Loudoun County by W.W. Surles June 13, 1974; Montgomery County by W.A. Allen May 26, 30, 1974, and June 2, 1974; and Rockingham County* by W.W. Surles June 12, 1974.

Chrysops obsoletus Wiedemann. A single adult was collected in Westmoreland County* by W.A. Allen July 3, 1974 3/.

Chrysops univittatus Macquart. Specimens were collected in: Appomattox County* by A.F. Buckman July 9, 1974 3/; Isle of Wight County* by W.A. Allen July 2, 1974 3/; Lancaster County* by W.A. Allen July 30, 1974; Montgomery County by M.W. Allen August 14, 1974; Orange County* by W.W. Surles and K.J. Surles August 11, 1974; Pulaski County* by L.H. Townsend July 2, 1974; and in Westmoreland County by W.A. Allen August 6, 1974.

Chrysops vittatus vittatus Wiedemann. Adults were collected in: Isle of Wight County* by W.A. Allen July 2, 1974 3/, July 31, 1974, and August 19, 1974; King and Queen County by W.A. Allen August 7, 1974; King William County* by W.A. Allen July 30, 1974; Orange County* by K.J. Surles and W.W. Surles August 11, 1974; Pittsylvania County* by G. Clement July 31, 1974; Richmond County* by W.A. Allen July 12, 1974; and Westmoreland County by W.A. Allen August 22, 1974.

Leucotabanus annulatus (Say). Adult females were collected in a blacklight trap in the Independent City of Virginia Beach by W.A. Allen July 16, 23, 25, 28, 1974, and August 20, 1974.

Hamatabanus carolinensis (Macquart). Male specimens were collected in a blacklight trap in the Independent City of Virginia Beach by W.A. Allen June 5, 11, 18, 1974, and a female was collected in Henry County* by G. Clement June 13, 1974.

Hybomitra difficilis (Wiedemann). Adults were collected in: Franklin County* by G. Clement June 18, 19, 1974; Henry County* by G. Clement June 13, 1974; and in Montgomery County by W.A. Allen June 4, 1974.

Hybomitra microcephala (Osten Sacken). A single specimen was collected in Wise County by D.E. Simonet August 11, 1973. This is only the second specimen taken in Virginia.

Tabanus atratus atratus Fabricius. One adult collected in James City County by D.E. Simonet September 26, 1973.

Tabanus calens Linnaeus. Two adults were collected in Pulaski County* by L.H. Townsend August 28, 1974.

3/ Collected in A.T. Adkins canopy trap.

Tabanus fulvulus Wiedemann. Adults were collected in: Appomattox County* by A.F. Buckman July 9, 1974 3/, and by W.A. Allen July 24, 1974 4/; Bedford County* by W.A. Allen July 11, 1974 4/; Buckingham County* by W.A. Allen July 11, 1974 4/; Essex County* by W.A. Allen July 12, 1974 4/; Franklin County* by G.L. Clement June 19, 1974; Halifax County* by W.H. Robinson July 10, 11, 1974; Henry County* by G.L. Clement July 18, 1974; Isle of Wight County* by W.A. Allen July 2, 1974 3/; Mecklenburg County* by K.J. Surles June 15, 1974; Pittsylvania County by G.L. Clement July 31, 1974; Powhatan County* by W.A. Allen July 11, 1974 4/; Prince George County* by W.A. Allen July 1, 1974 4/; Richmond County* by W.A. Allen July 12, 1974 3/; Stafford County* by W.A. Surles and K.J. Surles August 10, 1974; and Westmoreland County* by W.A. Allen July 3, 1974 3/.

Tabanus gladiator Stone. A single adult was collected in Isle of Wight County* by W.A. Allen August 19, 1974.

Tabanus lineola Fabricius. Adults were collected in: Appomattox County* by A.F. Buckman July 9, 1974 3/, and by W.A. Allen July 24, 1974 4/; Essex County* by W.A. Allen July 12, 1974 4/, and July 30, 1974; Halifax County* by W.H. Robinson July 10, 11, 1974; Isle of Wight County* by W.A. Allen July 2, 1974 3/, and July 31, 1974; King and Queen County* by W.A. Allen August 7, 1974; Louisa County* by W.A. Allen July 3, 1974 4/; Mecklenburg County* by K.J. Surles June 15, 1974; Nottoway County* by W.A. Allen July 1, 1974 4/; Orange County* by W.W. Surles and K.J. Surles August 11, 1974; Powhatan County* by W.A. Allen July 11, 1974 4/; Prince Edward County* by W.A. Allen July 1, 1974 4/; Prince George County* by W.A. Allen July 1, 1974 4/; Pulaski County* by L.H. Townsend July 2, 1974; Southampton County* by W.A. Allen July 1, 1974 4/; and Westmoreland County* by W.A. Allen July 3, 1974 3/.

Tabanus melanocerus Wiedemann. Adults were collected in: Appomattox County* by A.F. Buckman July 9, 1974 3/; Essex County* by W.A. Allen July 12, 1974 4/; Isle of Wight County* by W.A. Allen July 2, 1974 3/, and July 31, 1974; King and Queen County* by W.A. Allen August 7, 1974; and Richmond County* by W.A. Allen July 12, 1974 3/.

Tabanus molestus molestus Say. A single adult collected in Pulaski County* by W.A. Allen July 9, 1974.

Tabanus molestus mixis Philip. Single specimens were taken in: Halifax County* by W.H. Robinson July 10, 1974, and Henry County* by G.L. Clement on July 19, 1974.

3/ Collected in A.T. Adkins canopy trap.

4/ Collected on a store windowpane.

Tabanus nigrescens Palisot de Beauvois. Single adults were collected in: Botetourt County* by G.L. Clement June 30, 1974, and in Montgomery County by W.W. Surles June 1, 1974.

Tabanus nigripes Wiedemann. Specimens were collected in: Appomattox County* by A.F. Buckman July 9, 1974 3/; Henry County* by G.L. Clement July 18, 1974; Mecklenburg County* by K.J. Surles June 15, 1974; and in Pulaski County* by L.H. Townsend July 2, 1974,and by K.J. Surles August 1, 1974 3/.

Tabanus nigrovittatus Macquart. Two specimens were collected in Nansemond County* by K.J. Surles and W.W. Surles June 15, 1974.

Tabanus pallidescens Philip. Adults were collected in: Franklin County* by G.L. Clement June 18, 1974, and Mecklenburg County* by K.J. Surles June 15, 1974.

Tabanus petiolatus Hine. Specimens were collected by W.A. Allen in: Hanover County* August 6, 1974 4/; Isle of Wight County* July 2, 1974 3/; Prince George County* July 1, 1974 4/; Richmond County* July 12, 1974 3/; and Westmoreland County* July 3, 1974 3/.

Tabanus pumilus Macquart. Two specimens were collected in Westmoreland County* by W.A. Allen July 3, 1974 3/

Tabanus quinquevittatus Wiedemann. Adults were collected in: Buckingham County* by W.A. Allen July 11, 1974 4/; Lancaster County* by W.A. Allen July 30, 1974; Louisa County* by W.A. Allen July 3, 1974 4/; and in Pulaski County* by L.H. Townsend July 1, 2, 1974, and by K.J. Surles August 2, 1974 3/.

Tabanus reinwardtii Wiedemann. A single adult was collected in Franklin County* by G.L. Clement June 19, 1974.

Tabanus sagax Osten Sacken. A single specimen was collected in Pulaski County* by L.H. Townsend July 3, 1974.

Tabanus sparus milleri Whitney. Adult specimens were collected in: Appomattox County* by A.F. Buckman July 9, 1974 3/; Franklin County* by G.L. Clement during summer 1974; Henry County* by G.L. Clement June 13, 1974; Louisa County* by W.A. Allen July 3, 1974 4/; Nottoway County* by W.A. Allen July 1, 1974 4/; Orange County* by W.W. Surles and K.J. Surles August 11, 1974; and in Prince Edward County* by W.A. Allen July 1, 1974 4/.

Tabanus subsimilis subsimilis Bellardi. A single adult was collected in Loudoun County June 13, 1974, by W.W. Surles.

3/ Collected in A.T. Adkins canopy trap.

4/ Collected on a store windowpane.

Tabanus sulcifrons Macquart. Adults were collected in: Appomattox County* by A.F. Buckman July 9, 1974 3/, and by W.A. Allen July 24, 1974 4/; Bedford County* by W.A. Allen July 11, 1974 4/; Buckingham County* by W.A. Allen July 11, 1974 4/; Halifax County* by W.H. Robinson July 10, 1974; and in Pulaski County* by K.J. Surles August 1, 2, 1974 3/, and by L.H. Townsend August 14, 1974.

Tabanus trimaculatus Palisot de Beauvois. Adults were collected in: The Independent City of Hampton* by D.E. Simonet June 6, 1973; Isle of Wight County* by W.A. Allen July 2, 1974 3/; Mecklenburg County by K.J. Surles June 15, 1974; and Pulaski County* by L.H. Townsend July 1, 2, 1974, by W.W. Surles July 1, 1974, and by K.J. Surles August 1, 2, 1974 3/.

Correction: In Allen (1974).

Tabanus molestus mixis Philip. Was shown to have been collected in the City of Virginia Beach on June 25, 1973; July 5, 1973; July 23, 1973; July 30, 1973; and August 13, 1973. The July 5, 1973, date of collection is correct for this species. The other dates of collection should have been listed under Tabanus molestus molestus Say which was inadvertently omitted from the publication.

Reference Cited

Allen, W.A. 1974. Distribution Records of Several Virginia Tabanids (Diptera: Tabanidae). U.S. Dept. Agr. Coop. Econ. Ins. Rpt. 24(24):441-442.

3/ Collected in A.T. Adkins canopy trap.

4/ Collected on a store windowpane.

U.S. Dept. Agr.
Coop. Econ. Ins. Rpt.
25(15):305-309, 1975

Weather of the week continued from page 288.

rain all along New York State. The cold front extended straight south to Georga and into the gulf. High winds played havoc with powerlines and trees as gale winds covered the East from Lake Michigan to Georgia. The Pacific front moved to Montana with a front trailing into central California. Rainshowers were reported along the coast from the front northward through Washington. Snow fell along and behind the front in the mountains. A deep Low moved off the New England coast and became quasi-stationary on Friday. A ridge of very cold air was centered from Minnesota to Louisiana. Strong winds continued in the East. Trenton, New Jersey, experienced the second windiest day in its history when the average wind speed for 24 hours was 27.2 m.p.h. Peak gusts exceeded 60 m.p.h. in many areas of the East. Snow fell from New York northward through New England. A broad Low pressure area centered in Nevada and a cold ridge from Lake Superior to Mississippi combined causing a strong northward flow from the South through the Plains. An upslope flow caused snow in western North Dakota and Montana. Rain showers were falling along the Pacific Northwest coast. Saturday brought more of the same weather to the East as a strong, cold wind continued from New England to Virginia. Snowshowers were recorded from the Great Lakes eastward. A series of Low centers were located in Colorado, Nevada, and northern California. Light snow continued on the eastern slopes of the Rockies in North Dakota, Montana, Wyoming, and Idaho. Snow fell in eastern Washington. Rain in northern California spread southward. Strong winds continued on Sunday in the East. Snowshowers continued on the west side of the mountains from Pennsylvania northward. An area of Low pressure in the Southwest caused rain to spread southward in California and rainshowers or snowshowers in Nevada and Arizona. Strong winds were blowing from Iowa and Minnesota westward to the mountains. Snowshowers fell from western Kansas northward along the east slopes of the mountains.

TEMPERATURES: Many record-low temperatures were set during the week beginning in the upper Plains on Monday moving to the Southeastern United States by Sunday. Monday, a cold mass of air moved into the northern Plains and engulfed an area from Minnesota to Montana and south to South Dakota. The Nation's lowest temperature was recorded at International Falls, Minnesota, with a reading of 21 degrees below zero. Tuesday, cold air blanketed a large area from Lake Erie southwestward to the Texas Panhandle and into the Rockies. Some record-low temperatures were Williston, North Dakota, with 13 degrees below zero and Bismarck, North Dakota, 12 degrees below, the lowest for that date since 1881. Thursday, cold air moved south deep into Mexico and east to New York. Galveston, Texas, had a record low of 43 degrees and Waco, Texas, with 27 degrees was the coldest ever recorded in April. The wedge of cold air moved further into the Southeast on Friday continuing to topple old records for this time of year. By the end of the week, it had engulfed all of the United States except the southern half of Florida. Record temperatures on Sunday included 24 degrees at Charleston, West Virginia; 30 degrees at Raleigh, North Carolina; and 32 degrees at Agusta, Georgia, which was the coldest April 6 since 1891. Saturday, a return flow from the south had begun warming the Plains States, and on Sunday, parts of Colorado and Nebraska recorded remarkable temperatures in the 70's.

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